

What is claimed is:

1. An object lens, comprising

a first optical system that obtains a magnified image of an object;

5 a second optical system that guides dark field illumination light to the object;

a barrel that contains the first optical system and the second optical system and has an optical path around the first optical system for the dark field illumination light; and

10 a shield mechanism that is disposed on the optical path and that varies the incident area of the dark field illumination light to shield the dark field illumination light.

15 2. The object lens as set forth in claim 1,

wherein the shield mechanism has a plurality of shield plates and layered in the direction of the optical axis of the first optical system, the shield plates can be opened/closed by rotating about the optical axis so as to vary the incident area of the dark field illumination.

3. The object lens as set forth in claim 2,

wherein the barrel has a hold member that holds the first optical system, and

25 wherein each of the shield plates has:

a first fit portion that fits the hold member so that each of the shield plates can be opened/closed;

and

5 a second fit portion that causes each of the shield plates to be rotated together while the first fit portion fits the hold member so that the shield plates are opened/closed.

4. The object lens as set forth in claim 3,  
wherein the second fit portion has:

10 a fit protrusion that is disposed on the upside of each of the shield plates and that fits the upper adjacent shield plate, and

15 a guide groove that is disposed on the underside of each of the shield plates and that fits the fit protrusion of the lower adjacent shield plate and guides the fit protrusion when each of the shield plates is opened/closed.

5. The object lens as set forth in claim 3,  
wherein the second fit portion has:

20 a fit protrusion that is disposed on the underside of each of the shield plates and that fits the lower adjacent shield plate, and

25 a guide groove that is disposed on the upside of each of the shield plates and that fits the fit protrusion of the upper adjacent shield plate and guides the fit protrusion when each of the shield plates is opened/closed.

6. The object lens as set forth in claim 3,  
wherein when each of the shield plates that are

fit are rotated so that the incident area becomes the minimum, the shield plates overlap each other for a predetermined area.

7. The object lens as set forth in claim 2,

5 wherein at least one of the shield plates has a handle member that protrudes from the barrel.

8. The object lens as set forth in claim 3,

wherein the shield mechanism has:

10 a first shield plate group of the shield plates, the first shield plate group being rotatable together; and

a second shield plate group of the shield plates, the second shield plate group being rotatable together, the second shield plate group being operable  
15 independently from the first shield plate group.

9. A condenser, comprising:

a diaphragm mechanism that restricts dark field illumination light in a ring shape;

20 a condenser lens that guides the dark field illumination light restricted by the diaphragm mechanism to an object; and

a shield mechanism that varies the incident area of the dark field illumination light that enters the condenser lens so as to shield the dark field  
25 illumination light.

10. The condenser as set forth in claim 9,

wherein the shield mechanism has a plurality of

shield plates and layered in the direction of the optical axis of the condenser lens, the shield plates can be opened/closed by rotating about the optical axis so as to vary the incident area of the dark field illumination.

11. The condenser as set forth in claim 11,  
further comprising:

a rotation shaft that rotates the shield plates,  
wherein each of the shield plates has:

a first fit portion that fits the rotation shaft  
so that each of the shield plates can be opened/closed;  
and

a second fit portion that causes each of the  
shield plates to be rotated together while the first  
fit portion fits the hold member so that the shield  
plates are opened/closed.

12. The condenser as set forth in claim 12,  
wherein the second fit portion has:

a fit protrusion that is disposed on the upside of  
each of the shield plates and that fits the upper  
adjacent shield plate, and

a guide groove that is disposed on the underside  
of each of the shield plates and that fits the fit  
protrusion of the lower adjacent shield plate and  
guides the fit protrusion when each of the shield  
plates is opened/closed.

13. The condenser as set forth in claim 12,

wherein the second fit portion has:

a fit protrusion that is disposed on the underside of each of the shield plates and that fit the lower adjacent shield plate, and

5 a guide groove that is disposed on the upside of each of the shield plates and that fits the fit protrusion of the upper adjacent shield plate and guides the fit protrusion when each of the shield plates is opened/closed.

10 14. The condenser as set forth in claim 12,

wherein when each of the shield plates that are fit are rotated so that the incident area becomes the minimum, the shield plates overlap each other for a predetermined area.

15 15. The condenser as set forth in claim 11,

wherein at least one of the shield plates has a handle member with which the shield plates are opened/closed.

16. The condenser as set forth in claim 12,

20 wherein the shield mechanism has:

a first shield plate group of the shield plates, the first shield plate group being rotatable together; and

a second shield plate group of the shield plates, the second shield plate group being rotatable together, the second shield plate group being operable independently from the first shield plate group.